ABSTRACT

Porous polymers having a plurality of openings or chambers that are highly convoluted, with each chamber being defined by multiple, thin, flat partitions are produced by a new gel enhanced phase separation technique. In a preferred embodiment, a second solvent is added to a polymer solution, the second solvent causing the solution to gel. The gel can then be shaped as needed. Subsequent solvent extraction leaves the porous polymeric body of defined shape. The porous polymers have utility as medical prostheses, the porosity permitting ingrowth of neighboring tissue. The present technique also enhances shape-making capability, for example, of bifurcated vascular grafts, which feature a common entrance region but two or more exit regions.